

Title (en)  
Derivatisation of hydroxyacetale and hydroxyacetale mixtures

Title (de)  
Derivatisierung von Hydroxyacetalen und -acetalgemischen

Title (fr)  
Dérivation de mélanges d'hydroxy-acétales et d'acétales

Publication  
**EP 2436681 A1 20120404 (DE)**

Application  
**EP 10009238 A 20100906**

Priority  
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Abstract (en)  
Chemical reaction of hydroxyacetal compounds (I) or their mixtures, comprises C-O-C- or C-O-C=O-coupling reactions of the hydroxyl function of (I) or their mixtures in the presence of transition metal-phosphine- or -phosphite complex catalysts of the 8th subgroup in single- or multi-phase systems, where the coupling reactions are carried out at 0-200[deg] C, and the transition metal/phosphorus ratio is 1:0.5 to 1:100. Chemical reaction of hydroxyacetal compounds of formula R<sup>2</sup>C(R<sup>1</sup>)(OR<sup>3</sup>)OR<sup>4</sup> (I) or their mixtures comprises C-O-C- or C-O-C=O-coupling reactions of the hydroxyl function of (I) or their mixtures in the presence of transition metal-phosphine- or -phosphite complex catalysts of the 8th subgroup in single- or multi-phase systems, where the coupling reactions are carried out at 0-200[deg] C, and the transition metal/phosphorus ratio is 1:0.5 to 1:100. R<sup>1</sup>-R<sup>4</sup> : linear, branched, cyclic and optionally inter-linked alkyl groups, provided that at least one of R<sup>1</sup>-R<sup>4</sup> exhibits a free hydroxyl group.

Abstract (de)  
Beschrieben wird ein Verfahren ausgehend von Hydroxyacetalen bzw. -gemischen zur katalytischen C-O-C-Knüpfungsreaktionen zur Etherbildung, speziell durch Telomerisation von Diensystemen, wobei Palladium-(0)-Komplexe als Katalysator genutzt, der Carbonylierung von Olefinen mit Rhodium-(0)-Komplexen und deren Reaktion mit den Hydroxyacetalen bzw. -gemischen, sowie die Dimerisierung der Hydroxyacetalen bzw. -gemischen mit Ruthenium-(0)-Komplexen unter Wasserabspaltung. Das Verfahren ermöglicht eine Verlängerung der Kohlenstoffkette des verwendeten Hydroxyacetals bzw. -gemisches um mehrere C-Atom und eine Erhöhung des Brennwertes der Produkte sowie eine Senkung der Verdampfungstemperatur. Die Produkte können als Brennstoffe, Lösungsmittel, Detergenzien, Kosmetika, Weichmacher, Stabilisatoren, Pharmaka, Fungizide und Mikrobiozide, Aromastoffe, Zwischenprodukte und als Additive für verschiedene Anwendungsgebiete eingesetzt werden.

IPC 8 full level  
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Citation (applicant)  

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